United States
BG Bruce A. Berwick, Member
John W. Kangas, Secretary

International Lake Superior Board of Control

Canada
David Fay, Member
Rob Caldwell, Secretary

May 18, 2007

MEMORANDUM TO IJC SECRETARIES

Enclosed for your file are the minutes of the Board's meeting in Detroit on March 28, 2007.

Please post them on the IJC web site.

Enclosure

John W Kangas
Secretary, U.S. Section

CF:
Dr. M. Colosimo, IJC
Mr. T. McAuley, IJC
Board Members and Associates

INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL

Minutes of the March 28, 2007 meeting

The International Lake Superior Board of Control met on March 28, 2007 in a conference room at the U.S. Army Corps of Engineers in Detroit. Mr. McLeod convened the meeting at 1:00 p.m. The U.S. Member was represented by LTC William Leady, Commander of the Detroit District. The attendees were:

United States		Canada
	Board Members	
LTC W. Leady, Acting		Mr. C. McLeod
	Secretaries	
Mr. J. Kangas		Mr. D. Fay
	Regulation Representatives	
Mr. S. Thieme (Alt.)		Mr. D. Fay Mr. R. Caldwell (Alt.)
	Associates	
Mr. E. Taurianen Mr. D. Sawruk Mr. J. Oyler Mr. P. Ross Mr. T. Dahl Mr. T. Calappi Mr. K. Kompoltowicz		Mr. V. Lundhild

Item 1. Approval of Agenda

The agenda was approved as issued (encl 1).

Item 2. Update on Hydrologic Conditions and Regulation

LTC Leady provided the Board with the following update on hydrologic conditions for lakes Superior, Michigan-Huron, and Erie, and provided slides of recent net basin water supplies, levels (observed and forecasted), and Lakes Superior/Michigan-Huron water balance parameters.

- Water supplies to the Lake Superior basin in the past 6 months were well below average, with only the month of December receiving slightly above average supplies. Lake Superior basin monthly exceedance probabilities for water supplies ranged from 37% in December to 98% in September and February. Water supplies to the Lakes Michigan-Huron basin in the past six months were above average. Lakes Michigan-Huron NBS monthly exceedance probabilities ranged widely (from about 4% in December to greater than 99% in February).
- Lakes Superior and Michigan-Huron levels are well below average, with Lake Superior continuing in its longest period of below-average levels and Michigan-Huron in its second-longest period of below-average levels. Lake Superior has been below average since April 1998, with Michigan-Huron below average since January 1999. Lake

Superior is below last year at this time, while Michigan-Huron levels are about the same as last year. Lake Superior monthly mean levels were 35 to 45 cm (14 to 18 in.) below average for the past six months. Lakes Michigan-Huron were 32 to 49 cm (12½ to 19 in.) lower than average.

- Lake Superior outflows were below average from September through March, with Criterion (c) limiting outflows in January, February, and March. Outflows were as specified by Regulation Plan 1977-A, and the gate setting at the Compensating Works remained equivalent to ½ gate open.
- The Board was presented a range of projected levels for the next 6 months, along with slides showing how 2006-2007 levels compare to the previous two years. With average supplies, Lakes Superior and Michigan-Huron levels are expected to remain well below average. Lake Superior is not expected to rise above chart datum during the next six months, while Lakes Michigan-Huron are expected to rise above chart datum in May with average supplies.
- The 1900-1986 "standardized departure" data as used in Plan 1977-A show that Lake Superior is relatively worse off than Lakes Michigan-Huron. The lakes were in close balance as of August 2006, but since then Lake Superior has fallen precipitously and is near the record lows of 1926.
- Ice conditions were light on the Great Lakes this past winter.
- Mid-March snow water equivalent on the Lake Superior basin appears to be well below normal.
- The Board noted that the first commercial vessel through the Soo Locks this year was loaded at 40,000 tons, some 6,000 tons less than capacity due to the low levels. Mr. Sawruk reported that electric bills for their customers were from 14% to 18% higher this year due to the decreased water available for hydropower production and the need to purchase electricity to meet customer demand.

Item 3. Update on Long Lac and Ogoki Diversions

Mr. Caldwell reported that Ontario Power Generation (OPG) provided the Board with an update on the discharges of the Long Lac and Ogoki Diversions. The Ogoki Diversion into Lake Nipigon (which flows into Lake Superior) averaged 48.0 m^3/s (1,700 cfs) during September 2006 - February 2007. The Long Lac Diversion averaged 18.9 m^3/s (670 cfs) for the same period. The Long Lac Diversion was at record low amounts in September and October 2006. The total diversion was reported to be 49% of average for the reporting period. No water was spilled northward to the Ogoki River or northward from Long Lake during the reporting period.

Item 4. Flow Measurements

4a). Hydropower plants. Mr. Thieme reported that a preliminary analysis had been completed on the flow measurements taken in 2006. As a reminder, it was noted that in 2005, all measured flows were within 3% of the flows reported by ESEC and were thus within measurement tolerances. The next flow measurements are expected to be conducted in conjunction with the next 5-year inspection cycle for the Compensating Works (i.e., in 2010).

For the US Government Plant, Mr. Thieme reported on an extensive series of measurements in 2006. He stated that leakage does not appear to be the cause of the continuing flow reporting discrepancies. The Board will continue to correct the reported flows by adjusting them upward by 9%. The next effort to resolve the discrepancies will be to look at how the consultant derived the currently used ratings. At the Brookfield Power plant, the 2006 measurements to look at flows less than capacity determined that the plant reported flows compared very well with the measured data. Further measurements will not be needed until the detailed inspections of 2010.

The Board requested that the final report address the standard procedures for measuring flows. This will include such considerations as the number and types of meters, size of the field crew, etc.

4b). Compensating Works. Mr. Thieme reported that a preliminary analysis had been completed of the flow measurements taken in 2006. These measurements were to confirm the setting of 4 gates partially open to duplicate the flow through a single gate half-open. Analysis of the data indicated that a setting of 8 inches open is more accurate than the currently-used 10 inches open using gates 7 through 10. The Board agreed to use this as the standard setting in the future. The gates presently set to 10 inches will be reset when the gates are free of ice. The flow in the Rapids is expected to decrease by about 16% following the reset.

He also reported that the 2005 measurements had been analyzed and compared to the 1931 rating. For settings of one to three gates open, the measured flows were less than the rating. For settings of four to seven gates open, the measured flows were greater than the rating. Flows at settings of one to six gates open were within acceptable tolerances (5%). It was noted that settings greater than 6 gates open are relatively rare.

Item 5. Hydropower Plant Maintenance

Mr. Sawruk noted that there are no significant maintenance items this year at ESELCO. Last fall, outflows had been reduced in September and October to accommodate rebuilding a portion of the north bank of their intake canal. The company is beginning to look at what is required to keep the plant operational past the year 2050. A consultant has been retained to begin addressing this issue.

During cold weather in February and March, ESELCO used a portion of the U.S. Government plant allocation in order to prevent freezing in its forebay area.

The U.S. Government Plant had several maintenance issues last fall that reduced the flow through the plant for a total of 171 hours over the September 17 to December 13 period. The flows prescribed by the regulation plan were released each month while the ESELCO and US Plants were undergoing maintenance.

Other routine maintenance was performed for these two plants, as well as at the Brookfield Power plant. Mr. Lundhild reported that Unit C1 would be out of service from March 19 to April 26 and would likely be immediately followed by Unit C3. This would not affect their ability to pass their monthly water allocation since they still have sufficient capacity with the remaining units.

Item 6. Compensating Works

6a). Inspections. Routine annual inspections were conducted last year with only routine items found.

6b). Maintenance. Clearing of the embankment leading to the U.S. side of the Compensating Works, as identified in the last 5-year inspection, will be conducted this spring. In addition, some painting and the installation of new warning signs will be completed. Brookfield Power expects to begin repainting the eight Canadian gates of the Compensating Works this year. Two gates per year will be dewatered and painted. The nose cones to some of the gates will be repaired while the gates are dewatered. Also, more fencing is to be installed to further deter swimming near the structure.

Item 7. Peaking and Ponding

The Board noted that ponding was suspended on weekends and holidays from October to the close of navigation on January 15, and again beginning on March 25 when navigation resumed. It was noted that April levels were expected to be about 21 cm below datum at the US Slip gage, thereby triggering the cessation of weekend ponding. If the threshold were lowered a foot, ponding could have been allowed throughout the reporting period. Mr. Kangas noted that with Lake Superior being near record lows, the situation may arise when the levels in Lake Superior are the critical factor in determining how ships are loaded. In such cases, the suspension of ponding, while required, would not aid navigation through the Soo Locks area. This may need to be explored with the IJC if the situation develops.

The Board was informed that the contract with Dr. Bain, Cornell University, was on hold pending the receipt of funds to the Corps of Engineers. Additional funding sources will be pursued. Dr. Bain is to do a literature search on the impacts of peaking and ponding. The Board requested that the work be completed as soon as practical. A special meeting with Dr. Bain may be held in order for the Board to address the issues raised before the next meeting of the Board in September.

Item 8. 2007 Meeting With the Public

The Board reviewed the logistics and assignments for multi-site public meetings. The Board agreed to hold a single-site public meeting this year at the Soo to allow the new Canadian Board Member to inspect the facilities. It may also be an opportunity for Dr. Bain to tour the river below the locks and meet with Board Members and associates. The week of June 11 was tentatively targeted. (Note: subsequent to the Board meeting it was determined that the meeting would have to be later in the summer.)

Item 9. Review semi-annual progress report

Mr. Kangas led a review of the revised progress report. The Board had several comments and revisions to be incorporated prior to sending the final report to the IJC.

Item 10. Other Business

10a). Upper Lakes Study. The Board noted that a Study Board had reportedly been appointed and held an initial meeting in early March. The structure of subgroups had yet to be determined and members appointed. Two workshops were held: one on hydrologic modeling and one on the upper St. Clair River hydraulics.

10b). Great Lakes – St. Lawrence Seaway Study Mr. Thieme reported that funding limitations had revised the schedule. It is now expected that the engineering and economic model work would be completed in FY2007, with a report being issued in July 2007.

10c). Status of Lock Replacement. LTC Leady reported that the Limited Re-evaluation Report needed to address the issue of rail capacity should the Soo Locks facility not be available for commercial use. The Corps is also looking at refurbishing the lock facilities over the next six years, regardless of the new lock construction.

10d) Board Membership changes.
Mr. McLeod noted that he will retire from federal service on April 24, 2007. A new Canadian Board Member has not been named by the IJC yet. The Board and staff expressed their appreciation to Mr. McLeod for his 4+ years of service to the Board.

11. Next Meeting and IJC Appearance

The IJC Appearance are scheduled for 9:45 a.m. on April 18. The fall Board meeting is scheduled for the afternoon of September 12 in the Niagara Falls/Fort Erie area.

There being no other business, the meeting adjourned at 4:15 p.m.

INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL
MEETING OF MARCH 28, 2007

Approved Agenda

1. Approval of agenda
2. Update on Hydrologic Conditions and Regulation
3. Update on Long Lac and Ogoki Diversions
4. Flow Measurements
   a. Hydropower Plants
   b. Compensating Works
5. Hydropower Plant Maintenance
6. Compensating Works
   a. Inspections
   b. Maintenance: Recent and Planned
7. Peaking and Ponding Update
8. 2007 Meeting With the Public
9. Review semi-annual progress report
10. Other Business
    a. Status of Upper Great Lakes Study
    b. Status of Great Lakes – St. Lawrence Seaway Study
    c. Status of Lock Replacement
    d. Board Membership Changes
11. Next Meeting and IJC Appearances